simulated greenhouse gas and trace gas emissions resulting from land use change along the eastern coast of thailand

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Land use has continuously changed by human activities that consequently affected on greenhouse gas emissions. Conversion of land use from agriculture to industrial activities could emit some GHG into the atmosphere. CH_4, N_20, SO_2 and NO_2 emissions were studied from this kind of land use change. The study was conducted using the LANDSAT TM imageries acquired in a decade of 1987-1997 to render reliable data of the change of land use in Rayong. The ISC model was used to simulate mentioned GHG emissions from non-fuel combustible industrial processes in the industrial estate under different scenarios. Simulation results displayed isopleths of GHG and trace gas emissions including their maximum concentrations at the communities nearby. SO_2 and NO_2 concentrations were almost higher than the ambient air quality standard of Thailand that can affect on human health and cause some nuisance to people in the communities. This study is a first step for an in-depth characterization of effects of land use change on GHG emissions along the eastern coast of Thailand.